

Amendments to the Drawings:

The attached sheet of drawings includes changes to FIG. 5. This sheet, which includes FIG. 5, replaces the original sheet including FIG. 5.

REMARKS

The Final Office Action mailed September 28, 2006, has been received and reviewed. Claims 45 through 76 are currently pending in the application, of which claims 45 through 61 are currently under examination. Claims 62 through 76 are withdrawn from consideration as being drawn to a non-elected invention. Claims 45 through 61 stand rejected. Applicants propose to amend the specification and FIG. 5. Applicants respectfully request reconsideration of the application as proposed to be amended herein.

Claim Interpretation

The Examiner asserts, at page 2 of the Office Action mailed September 28, 2006, that “[t]he only constituent to which patentability may be ascribed would be in the composition of the “shear ply” and not to any arrangement thereof in a rocket motor since there are insufficient details and disclosure to show any such construction.” Applicants respectfully disagree as hereinafter set forth.

Applicants note that “[a]ll words in a claim must be considered in judging the patentability of claim against the prior art” *In re Wilson*, 424 F.2d 1382 (CCPA 1970). As such, applicants respectfully submit that patentability is ascribed to each and every element of the claim as a whole and not just to a particular constituent, regardless of the presence or absence of adequate written description for a particular claim element.

Claims are interpreted by “giving claims their broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art.” *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (Citations omitted). Applicants respectfully submit that the sufficient details available in the specification to inform one of ordinary skill in the art of a rocket motor assembly as claimed and therefore the use of the shear ply in the rocket motor assembly must be given patentable weight. “A patent need not teach, and preferably omits, what is well known in the art.” *In re Buchner*, 929 F.2d 660, 661 (Fed. Cir. 1991). Applicants respectfully submit that the Specification, as filed, makes clear reference to rocket motor assemblies being part of the present invention (*see, e.g.*, ¶ [0014]) and that one of ordinary skill in the art understands what a “rocket motor assembly” comprises as well as how to build and use

one (*see* WO 01/04198 A1, which discloses a “rocket motor assembly” and is of record in this case; for further examples, *see, e.g.* U.S. Patents 7,070,705, 7,040,143, 7,012,107, 6,893,597, 6,691,505, 6,606,852, 6,495,259, 6,446,979, and 6,226,979, which all disclose a “rocket motor assembly”).

Objections to the Specification

The Examiner asserts, at page 3 of the Office Action mailed September 28, 2006, that added paragraph [0021.1] and Fig. 5 have no support in the Specification as filed. The Examiner further asserts that the sentence added to paragraph [0035] as has no support in the Specification as filed. *Id.* Applicants respectfully traverse the objections as hereinafter set forth.

Applicants respectfully submit that FIG. 5, as amended, does not constitute new matter as FIG. 5 now graphically depicts, in the simplest terms, the matter discussed in the last sentence of ¶ [0014]; to wit: “interposing the rubber shear ply between a skirt and composite rocket motor case of a rocket motor assembly.” As depicted in FIG. 5, as amended, shown generally is a rocket motor assembly 8, having shear ply 2, interposed between rocket motor case 4 and a skirt 6. As such, the material depicted in FIG. 5, as amended, is not new matter as it depicts exactly the description appearing at ¶ [0014] of the Specification as filed.

Applicants respectfully submit that, as FIG. 5, as amended, has support in the specification, the required text briefly describing that figure (new ¶ [0021.1]) is also support by the Specification as filed and cannot be considered new matter.

Last, applicants respectfully that that material added in paragraph [0035] is not new matter as it is supported in ¶ [0014] of the specification as filed and merely describes, using the reference numerals, the contents of FIG. 5, as amended.

In view of the foregoing, applicants respectfully request that the objections to the specification be withdrawn and reconsideration of the application.

35 U.S.C. § 112 Claim Rejections

Claims 45 through 61 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the Examiner alleges that “there is no disclosure to teach the ‘rocket motor assembly’ . . . no guidance is given as to what the ‘rocket motor assembly’ may comprise or even how it is made.” Office Action mailed September 28, 2006, at page 4. Applicants respectfully traverse the rejections, as hereinafter set forth.

“The test of enablement is whether one of reasonable skilled in the art could make or use the invention from the disclosure in the patent coupled with information known in the art without undue experimentation.” *U.S. v. Teletronics, Inc.*, 857 F.2d 778, 785 (Fed. Cir. 1991) (emphasis added). Further, as noted *supra*, “[a] patent need not teach, and preferably omits, what is well known in the art.” *Buchner*, 929 F.2d at 661.

Applicants respectfully submit that the Specification, as filed, makes clear reference to rocket motor assemblies being part of the present invention (*see, e.g.*, ¶ [0014]) and that one of ordinary skill in the art understands what a “rocket motor assembly” comprises as well as how to build and use one (*see* WO 01/04198 A1, which discloses a “rocket motor assembly” and is of record in this case; for further examples, *see, e.g.* U.S. Patents 7,070,705, 7,040,143, 7,012,107, 6,893,597, 6,691,505, 6,606,852, 6,495,259, 6,446,979, and 6,226,979, which all disclose a “rocket motor assembly”). As such, applicants respectfully submit that one of ordinary skill in the art could make or use the invention without very little or no experimentation as rocket motor construction is well known in the art and the location of the shear ply within that rocket motor is explicitly stated in the claim 45; to wit: “a shear ply interposed between a rocket motor case and a skirt.” Consequently, applicants respectfully submit that claim 45 is enabled by the specification. Accordingly, applicants respectfully request the withdrawal of the rejection of claim 45 under 35 U.S.C. § 112, first paragraph, for lack of enablement, and reconsideration of same.

Further as claims 46-61 depend, directly or indirectly, from claim 45, applicants respectfully submit that these claims are enabled, *inter alia*, as depending from an enabled base claim.

Claims 58 and 59 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the Examiner alleges that “the recitations as to hydrogen saturation are not shown in the Specification, as originally filed.” Office Action mailed September 28, 2006, at page 4. Applicants respectfully traverse the rejections, as hereinafter set forth.

Applicants note that “[t]he claims as filed in the original specification are part of the disclosure and, therefore, if an application as originally filed contains a claim disclosing material not found in the remainder of the specification, the applicant may amend the Specification to include the claimed subject matter.” *In re Benno*, 768 F.2d 1340 (Fed. Cir. 1985). Applicants respectfully submit that claims 58 and 59 are supported in at least ¶ [0011] of the Specification as amended. Support for the amendments to ¶ [0011] of the Specification can be found at least in original claims 14 and 15 of the present application; in original claims 18, 19, 36, 37, 72, and 73 of the parent application (U.S. App. 10/107,594), and in original claims 18, 19, 36, 37, 74, and 75 of the grand-parent application (U.S. Prov. App. 60/279,560). Further, given the holding of *In re Benno*, such an amendment to the Specification is permissible. Consequently, applicants respectfully request the withdrawal of the rejections of claims 58 and 59 under 35 U.S.C. § 112, first paragraph, for lack of written description, and reconsideration of same.

Claims 45 through 61 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Specifically, it the Examiner alleges that “[t]he recitation of the ‘rocket motor assembly’ is not clear as to its proper metes and bounds.” Office Action mailed September 28, 2006, at page 4. It is further alleged that “[n]o guidance is given as to what the ‘rocket motor assembly’ may comprise, or even how it is made, and, as such, the claims are deemed to be vague and confusing.” *Id.* Applicants respectfully traverse this rejection, as hereinafter set forth.

“Definiteness of claim language must be analyzed, not in a vacuum, but in light of A) the content of the particular application disclosure; B) the teachings of the prior art; and C) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art.” M.P.E.P. § 2173.02. “Accordingly, a claim term that is not used or defined in the specification is not indefinite if the meaning of the claim term is discernible.” *Id.* Applicants respectfully submit that, as rocket motor assemblies are well known in the prior art (*see* WO 01/04198 A1, which discloses a “rocket motor assembly” and is of record in this case and other exemplary patents *supra*), one of ordinary skill in the art would be able to discern the meaning of “a rocket motor assembly” and readily understand its metes and bounds. As such, applicants submit that the claim term “rocket motor assembly” cannot be indefinite. Consequently, applicants respectfully request the withdrawal of the rejections of claims 45-61 under 35 U.S.C. § 112, second paragraph, and reconsideration of same.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 5,860,883 to Jonen *et al.*, U.S. Patent 6,240,993 to Onaka *et al.*, U.S. Patent 6,352,488 to Morris *et al.*, U.S. Patent 6,443,866 to Billups or U.S. Patent 6,739,854 to Nagata *et al.*

Claims 45 through 61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jonen *et al.* (U.S. Patent 5,860,883), Onaka *et al.* (U.S. Patent 6,240,993), Morris *et al.* (U.S. Patent 6,352,488), Billups (U.S. Patent 6,443,866), or Nagata *et al.* (U.S. Patent 6,739,854) (collectively hereinafter “the cited references”). Applicants respectfully traverse this rejection, as hereinafter set forth.

As a preliminary matter, applicants wish to address the Examiner’s assertion that the applicants tacitly acknowledge that any patentability to the claims resides in the shear ply composition *per se*. Office Action mailed September 28, 2006, at page 8. Applicants respectfully deny that the patentability of the claims resides only in the composition of the shear ply. Applicants respectfully submit that patentability resides in the claim as a whole, and that no particular portion of a claim makes it any more patentable than any other portion.

The 35 U.S.C. § 103(a) obviousness rejections of claims 45 through 61 are

improper as the references fail to teach or suggest each and every element of the claims. *See, e.g., In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Specifically, the references fail to teach the use of the shear ply composition in a rocket motor as recited by claim 45. The Examiner agrees, noting at page 6 of the Office Action mailed September 28, 2006 that “the references are not drawn to the concept of a rocket motor assembly.” The Examiner apparently indicates that, because the Examiner feels that the applicants have failed to provide adequate written description for a rocket motor assembly, that this element can be ignored for the purposes of interpreting the claims. *Id.* at pages 6 and 8.

“All words in a claim must be considered in judging the patentability of claim against the prior art” *In re Wilson*, 424 F.2d 1382 (CCPA 1970). “The fact that claim terms may be indefinite does not make the claim obvious over the prior art.” M.P.E.P. § 2173.06. When there is a great deal of confusion and uncertainty as to the proper interpretation as the elements of the claim [(as seems to be the case here regarding “a rocket motor assembly”)], it is generally not proper to reject a claim on the basis of prior art. *Id.*

Applicants respectfully submit that, as the Examiner has not employed a reasonable interpretation of what comprises “a rocket motor assembly,” the rejections under 35 U.S.C. § 103(a) are improper and should be withdrawn. In addition, applicants respectfully submit that the rejections under 35 U.S.C. § 103(a) are improper as the references do not teach each and every element of the claims.

Applicants further submit that the rejections under 35 U.S.C. § 103(a) are improper as the Examiner has provided no motivation to modify the references. “To establish a *prima facie* case of obviousness . . . there must be some suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art to modify the reference.” *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Applicants note that the Examiner agrees that the references must be modified in order to make the present claims obvious; to wit: “the references are not drawn to the concept of a rocket motor assembly.” Office Action mailed September 28, 2006, at page 6. Applicants respectfully submit that the Examiner has not established a

prima facie case of obviousness as the Examiner has not provided any motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references and use a shear ply composition as part of a rocket motor assembly.

In view of the foregoing, applicants respectfully request the withdrawal of the rejections of claims 45-61 under 35 U.S.C. § 103(a) and reconsideration of same.

Rejoinder

Upon allowance of claims 45-61 (product claims), rejoinder and allowance of claims 62-76 (method claims), are respectfully requested as allowed by M.P.E.P. § 821.04(b).

ENTRY OF AMENDMENTS

The proposed amendments to specification and the drawings above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application. Further, the amendments do not raise new issues or require a further search. Finally, if the Examiner determines that the amendments do not place the application in condition for allowance, entry is respectfully requested upon filing of a Notice of Appeal herein.

CONCLUSION

Claims 45-61 are believed to be in condition for allowance, and notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, the Examiner is respectfully invited to contact Applicants' undersigned attorney.

Serial No. 10/783,867

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Dan J. Morath', with a stylized flourish at the end.

Daniel J. Morath Ph.D.
Registration No. 55,896
Attorney for Applicants
TRASKBRITT
P.O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: 801-532-1922

Date: November 28, 2006

JAW/dlm:slm

Attachment: Replacement Sheet (FIG. 5)